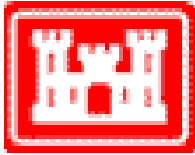


PUBLIC NOTICE



**US ARMY CORPS
OF ENGINEERS**

APPLICANT: US Army Corps of Engineers
APPLICATION NO: 200430403
WATERWAY: Big Sioux River/Skunk Creek

OMAHA DISTRICT

ISSUE DATE: March 25, 2005
EXPIRATION DATE: April 14, 2005

Regulatory Office, 28563 Powerhouse Rd, Room 118, Pierre, SD 57501
<https://www.nwo.usace.army.mil/html/od-rsd/frame.html>

21-DAY NOTICE

JOINT NOTICE OF PERMIT PENDING

US ARMY CORPS OF ENGINEERS AND SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Under the provisions of Federal regulations 33 C.F.R. 335-337 and instructions from the Office, Chief of Engineers, Washington, D.C., relative to Federal projects involving the discharge of dredged or fill material in waters of the United States, notice is hereby issued to advise interested parties of the proposed Phase II of the Sioux Falls Flood Protection Project on the Big Sioux River and Skunk Creek in Minnehaha County, South Dakota.

Sections 313 and 404 of the Clean Water Act (33 U.S.C. 1323 and 1344) require each agency of the Federal Government engaged in any activity resulting in, or which may result in the discharge or runoff of pollutants, to comply with Federal, State, or interstate and local requirements respecting the control and abatement of water pollution to the same extent as any person or entity is subject to such requirements. In accordance with 33 C.F.R. 335-337, activities involving the discharge of dredged or fill material to be performed by the Corps of Engineers will be subject to public review procedures that are followed in processing applications for Section 404 permits.

Proposed Work and Location

The proposed work is part of phase II of a larger, three phase flood protection project. Phase I construction of the project is complete; phase II is scheduled to begin mid-year of 2005. Design and construction of phase III would begin in the spring of 2006. Phase II work consists of 1) placing an inflatable dam directly above the Big Sioux River and Skunk Creek confluence, 2) raising the existing levees along the Big Sioux River and Skunk Creek, and 3) replacing the 41st Street Bridge.

The inflatable dam would be located in the Big Sioux River directly above the Skunk Creek and Big Sioux River confluence (Section 19, Township 101 North, Range 49 West; and Section 24, Township 101 North, Range 50 West); the levee raises would take place on both sides of the banks on the Big Sioux River from the downstream side of the inflatable dam to approximately Interstate 229; on both sides of the banks on Skunk Creek from approximately Marion Road to the confluence with the Big Sioux River, and on both sides of the banks of the "Prairie View Bypass Channel from approximately 57th Street to the confluence with the Big Sioux River; the 41st Street Bridge is located in the southwest corner of Sioux Falls (Sections 30 and 31, Township 101 North, Range 49 West). Each component of the project is described below.

Project Purpose

The purpose of phase II of the overall project is to reduce potential flood damages caused by a 100-year flood on Skunk Creek. Originally, phase II included levee raises from approximately Russell Street to Interstate 229 and from the mouth of Skunk Creek to Marion Road. In light of recent hydraulic analysis, phase II has been changed. Phase II is now comprised of an inflatable dam located above the confluence, levee raises starting directly downstream of the inflatable dam running downstream to Interstate 229 and from the mouth of Skunk Creek to Marion Road and from the mouth of the Prairie View Bypass Channel, and replacement of the existing 41st Street Bridge. The purpose of the inflatable dam is to eliminate a backwater condition on the Big Sioux River during 100-year flood events on Skunk Creek. Raising the existing system of levees will help protect from flood damages. The purpose of the 41st Street Bridge raise is to eliminate the potential structural damage to the existing 41st Street Bridge that would occur during a 100-year flood event on Skunk Creek. Construction of the inflatable dam would last approximately four to six months. Construction of the levee raises would begin approximately mid-year 2005; construction of the levees would last approximately 12 months. The local sponsor (City of Sioux Falls) would be responsible for design and construction of the new 41st Street Bridge and construction would not occur until 2010. The 41st Street Bridge construction would last approximately 12 months.

Inflatable Dam

The inflatable dam would consist of a rubber inflatable bladder placed atop a concrete sill. The sill would be approximately 50 feet wide and 2 feet high, running along the river bottom and up the levee slopes on both sides of the channel. The concrete sill (consisting of approximately 926 cubic yards of concrete) would be placed on top of a foundation of sheet piles, drive piles or another similar material to anchor the sill. A total of approximately 276 cubic yards of riprap (9 inches diameter) would be placed 10 feet upstream (5H:1V slope) and 20 feet downstream (10H:1V slope) of the dam on the bottom of the riverbed on either side of the inflatable dam to protect the sill. The purpose of the riprap is to ensure the inflatable dam is not exposed to outflanking or undercutting on both the upstream and downstream sides. Secondary benefits of the riprap would be that it would abate the safety hazards caused by the water dropping directly over the dam, and aid in fish passage. Polyvinyl Chloride (PVC) or another type of non-corrosive pipe would be installed into either the top of the sill or within the concrete. These pipes would be connected to two rotary positive-type blowers located in a "control house" adjacent to the dam. One blower would be used to inflate the dam, and the other would be used as an emergency backup.

The control house would be located on the landward side of the existing levee on the left bank of the Big Sioux River. The approximate footprint of the control house is 352 square feet. Refer to attachments for general plans of the control house.

When fully inflated, the dam raises to a height of one foot below the new levee height. During non-flood conditions within Skunk Creek the inflatable dam would remain in the deflated position. When deflated, the bladder rests flat on top of the two-foot high sill. The dam would be automatically inflated when a "float" located upstream on Skunk Creek reaches the water level of the 20-year event. Skunk Creek floods occur suddenly from thunderstorms. There is a five percent chance for a 20-year event to occur on Skunk Creek in any given year. The dam would be designed to inflate at a 20-year event on Skunk Creek, and rise in increments according to the water levels to efficiently operate the dam. Inflation time to fully inflate the dam, for 100-year protection, would be approximately 2.5 hours, and the dam would remain inflated for approximately 24 hours. Deflation would last approximately 6 hours, making a total inflation/deflation time of approximately 1.5 days for the 100-year flood. Events less than the 100-year flood would require less time for inflation and deflation. During events greater than the 100-year, the inflatable dam could potentially remain inflated for a longer period of time, but not an extended period of time.

Construction of the foundation for the inflatable dam would require use of temporary dams to allow for excavation. The upstream diversion gates would be closed to divert water away from the construction area. Two cofferdams (combination of sheet piles and rock) would be placed approximately 50 feet upstream and 50 feet downstream of the inflatable dam construction area. The cofferdam upstream would be built to protect the construction area from local runoff. The cofferdam upstream would stretch across the entire width of the channel (250 feet), and would be approximately 6 feet high with a crown width of approximately 6 feet and 3H:1V slopes, utilizing approximately 3,000 cubic yards of rock. The cofferdam downstream would also stretch across the entire width of the channel, and built to the height of the levees (25.8 feet); the crown width of the cofferdam would be approximately 12 feet with 3H:1V slopes, utilizing approximately 15,000 cubic yards of rock. Up to two, two foot by two foot temporary box

culverts, about 250 feet long would be used to pass flow from local runoff upstream of the construction area to downstream of the construction area. The estimated amount of sheet pile would be approximately 2,000 square feet for each cofferdam (4,000 total square feet). Once construction is completed, the channel would be restored to its original condition.

The total footprint of the inflatable dam and riprap is approximately 20,000 square feet (12,500 square feet in the streambed, 7,500 square feet on the banks) or .45 acres. Direct impacts to the streambed would be approximately .28 acres.

The footprint of the temporary dam upstream would be approximately 19,500 square feet, or .45 acres. The footprint of the temporary dam downstream would be approximately 41,750 square feet, or .96 acres.

Raising Existing Levees

Existing levee height would be raised approximately five feet extending the landward toe of the levee downstream of the inflatable dam. The levee raises start directly downstream of the proposed inflatable dam on both sides of the Big Sioux River channel and extend downstream to Interstate 229 extending the landward toe subsequently filling adjacent wetlands. A total of approximately 2.30 acres of wetlands at 11 sites will be impacted. Levees will also be raised from the mouth of Skunk Creek to Marion Road, but no wetlands will be filled. Refer to the attached plans and cross section views of the proposed levee system.

41st Street Bridge Raise

The 41st Street Bridge over the Big Sioux River was originally constructed in approximately 1965 and was widened in approximately 1975. The existing bridge is a 282 foot, 3 span, welded steel plate girder superstructure acting compositely with the cast-in-place concrete deck. A 92 foot clear roadway width is provided along with 1 foot 4 inch wide traffic barrier rails and 5 foot clear sidewalks along each edge resulting in a total out-to-out deck width of 106 feet 10 inches with the inclusion of the pedestrian barrier rails.

The existing bridge is a three span continuous design supported by reinforced concrete piers and abutments. The existing piers are wall type founded on timber piles. The pier wall is 100 feet wide and varies in thickness from 1 foot 9 inches at the top to 3 feet 3 inches at the base. The footing is 101 feet transverse to centerline of the roadway by 10 feet along roadway to 2 feet 6 inches thick.

The proposed 41st Street Bridge is a 304 foot, 3 span rolled steel beam bridge with a composite concrete deck. A 92 foot clear roadway width is provided along with 1 foot 4 inch wide traffic barrier rails and 10 foot clear sidewalk along the northern edge and a 6 foot clear sidewalk along the southern edge resulting in a total out-to-out deck width of 112 feet 4 inches. The number of driving lanes would remain as the existing 7 lanes (6 driving lanes and 1 center turn lane). Provisions would be made to maintain two lanes of traffic in each direction during all phases of construction. Refer to attached plans of the proposed 41st Street Bridge.

Two concrete piers would be constructed in the Big Sioux River channel at the same location as the existing piers. The piers would be founded on steel H-pile supported concrete footings. The approximate footing dimensions are 125 feet transverse to centerline of roadway by 10 feet along centerline of roadway by 3 feet thick. The bottom of the footing would be approximately at elevation 1381.9. The new piers would be similar in type as the existing piers.

The proposed vertical wall abutments with 2H:1V side slopes would be moved back from the existing abutments approximately 11 feet on each side. This would aid in the construction of the proposed abutments.

The old piers would be removed completely and in stages. Most of the concrete from pier removal would not be allowed to remain in the Big Sioux River. Existing timber piles may be removed or allowed to remain in place, pending final design.

During the construction of the piers, a dry environment would be needed. Diversion of the flow would not be possible, so the contractor would need to provide some sort of cofferdam. This cofferdam could be constructed in various ways, such as driven sheet piles. Dewatering would be necessary during construction.

The contractor may construct two temporary water crossings to facilitate access of construction equipment. The 41st Street Bridge would be constructed in phases. The contractor would likely construct a temporary crossing on the upstream of the 41st Street Bridge for construction on the north side (westbound lanes) of the bridge. Upon completion of the construction of the north side (westbound lanes) of the bridge, the contractor may remove the northern temporary crossing and then proceed to construct a southern or downstream temporary crossing. The scheduled removal of the initial temporary crossing would be determined by the contractor. Both temporary crossings may be in place at the same time during the construction period. Once the construction has been completed the temporary crossings will be removed and the areas would be restored to its original condition. The crossings would be approximately 15 foot wide and 15 foot tall with 3H:1V slopes. Three 10 foot by 10 foot box culverts, about 110 feet long would run through the temporary crossing. The estimated amount of material (rock) for the temporary crossing would be approximately 5,500 cubic yards.

Direct impacts to the streambed would be approximately .01 acres. The existing pier footprint is about 450 square feet; the new bridge piers would be about 750 square feet.

The footprint of each temporary crossing for bridge construction would be approximately 26,250 square feet, or .60 acres.

Mitigation

Mitigation for the 2.30 acres of wetland impacts will be at a ratio of 1.5:1 and will consist of wetland restoration at a site located landward of the existing levee on the Big Sioux River, south of 49th Street.

The South Dakota Department of Environment and Natural Resources, Division of Environmental Regulatory, 523 East Capitol Avenue, Pierre, South Dakota, 57501-3181, will review the proposed project for state certification in accordance with the provisions of Section 401 of the Clean Water Act. The certification, if issued, will express the State's opinion that the operations undertaken by the applicant will not result in a violation of applicable water quality standards. The South Dakota Department of Environment and Natural Resources hereby incorporates this public notice as its own public notice and procedures by reference (ARSD 74:51:01).

The Corps of Engineers, Omaha District will comply with the National Historic Preservation Act of 1966, as amended. We have checked the National Register of Historic Places and its current supplements, and there are no known National Register sites in the project area. The project area was disturbed when the original levees were constructed in 1961. In addition, the Corps of Engineers has conducted a cultural resources reconnaissance survey of the project area and no historic properties were located. We will, however, evaluate input by the State Historic Preservation Officer and the public in response to this public notice.

In compliance with the Endangered Species Act, a preliminary determination has been made that the described work is not likely to adversely affect species designated as threatened or endangered or adversely affect critical habitat. The federally listed Bald Eagle and Topeka shiner may occur in the project area. In order to complete our evaluation of this activity, comments are solicited from the U.S. Fish and Wildlife Service and other interested agencies and individuals.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, and, in general the needs and welfare of the people. In addition, the evaluation of the impact of work on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act (40 C.F.R.; Part 230).

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

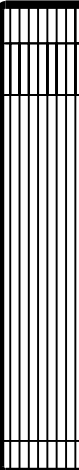
Any person may request, in writing and within the comment period specified in this notice, that a public hearing be held for the purpose of gathering additional information. Requests for public hearings shall be identified as such and shall state specifically the reasons for holding a public hearing and what additional information would be obtained. Requests should be submitted to the District Engineer, Omaha District, Corps of Engineers, 106 South 15th Street, Omaha, Nebraska 68102-1618. Should the District Engineer decide that additional information is required and a public hearing should be held, interested parties will be notified of the date, time and location.

Any interested party (particularly officials of any town, county, state or Federal agency; Indian Tribe; or local association, whose interests may be affected by the work) is invited to submit to this office written facts, arguments, or objections on or before the expiration date listed on the front of this notice. Any agency or individual having an objection to the work should identify their concern or interest with clear and specific reasons. Comments, both favorable and unfavorable, will be accepted, made a part of the record and will receive full consideration in subsequent actions on this application. All replies to the public notice should be addressed to the address listed in the previous paragraph. Ms. Kathy Iske, telephone number (402) 221-3055, may be contacted for additional information. You may also fax your comments to (402) 221-4939 or e-mail them to: Kathy.L.Iske@usace.army.mil.

Comments received after the close of business on the expiration date of this public notice will not be considered.

A permit, if issued, will be under the provisions of Section 404 of the Clean Water Act.

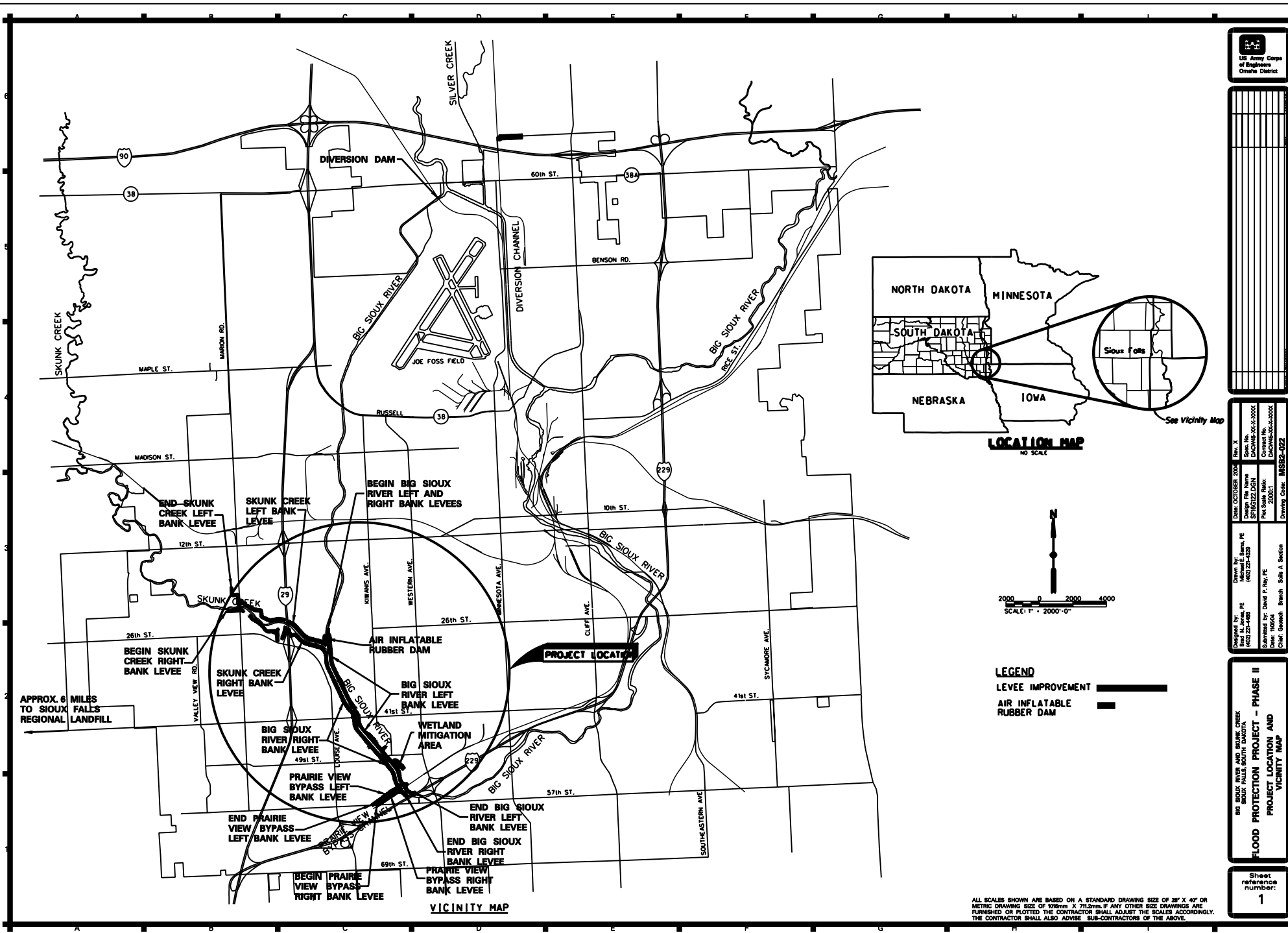
Drawings showing the location and extent of the work are attached to this notice.



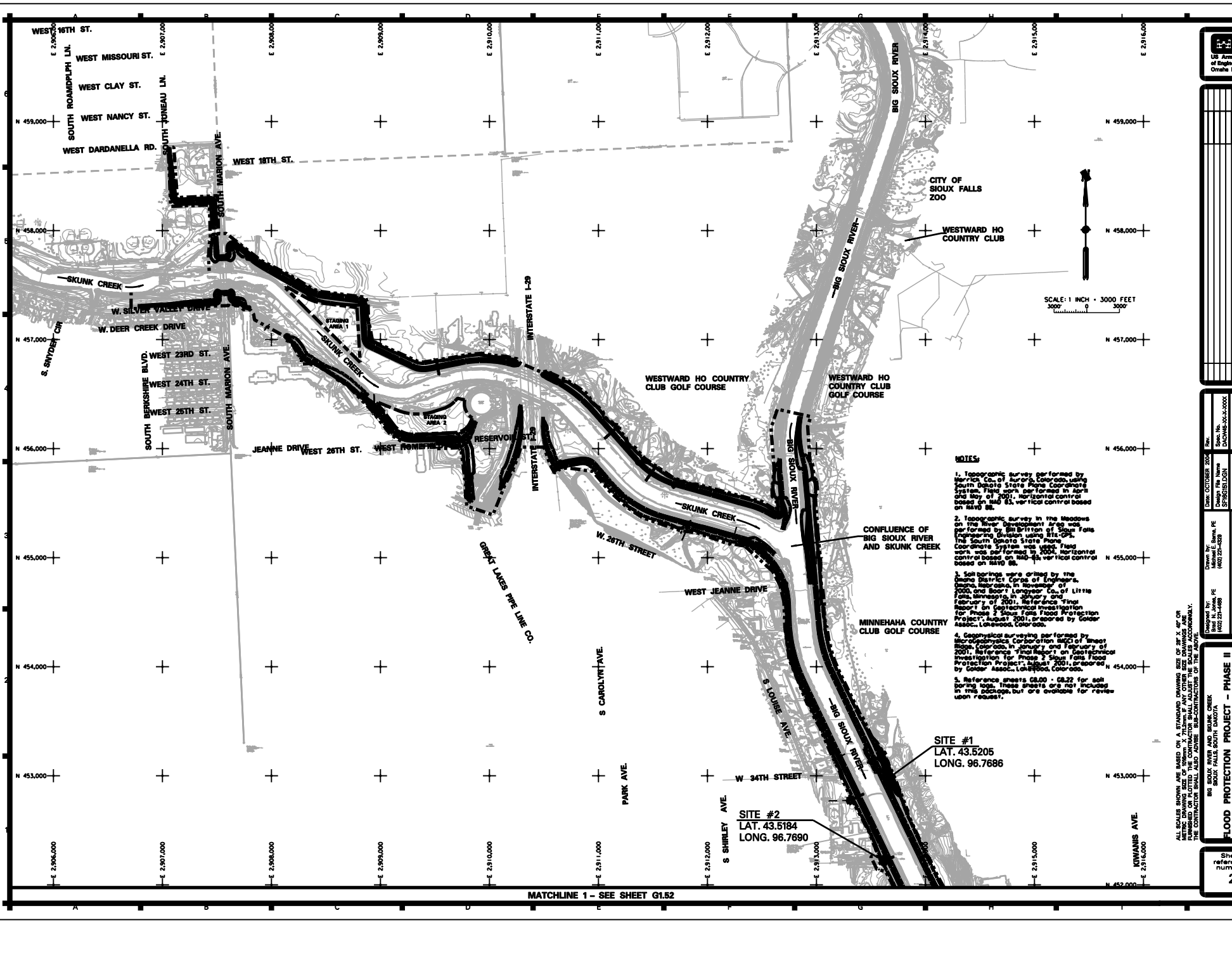
Submitted by:	David P. Noy, PE	Contract No.:	DAW65-05-3-000X
Date:	10/04/04	Project Ratio:	2000:1
Designed by:	Brad N. Jones, PE (402) 221-4688	Design File Name:	P166122.DGN
Drawn by:	Michael E. Barnes, PE (402) 221-4320	Spec. No.:	DAW65-05-3-000X
Date:	OCTOBER 2004	Rev. X	

**BIG SIOUX RIVER AND SKUNK CREEK
SIOUX FALLS, SOUTH DAKOTA**

Sheet
reference
number:
1



ALL SCALES SHOWN ARE BASED ON A STANDARD DRAWING SIZE OF 26" X 40" OR METRIC DRAWING SIZE OF 1016mm X 711.2mm. IF ANY OTHER SIZE DRAWINGS ARE FURNISHED OR PLOTTED THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY. THE CONTRACTOR SHALL ALSO ADVISE SUB-CONTRACTORS OF THE ABOVE.



- NOTES:**
1. Topographic survey performed by Morris Co. of Aurora, Colorado, using South Dakota State Plane Coordinate System. Field work performed in April and May of 2001. Horizontal control based on NAD 83, vertical control based on NAVD 83.
 2. Topographic survey in the Meadows of the River Development Area was performed by Bill Britton of Sioux Falls Engineering Division using NAD 83. The South Dakota State Plane Coordinate System was used. Field work was performed in 2001. Horizontal control based on NAD 83, vertical control based on NAVD 83.
 3. Soil borings were drilled by the Omaha District Corps of Engineers, Omaha, Nebraska, in November of 2000 and Boert Longyear Co. of Little Falls, Minnesota, in January and February of 2001. Reference Final Report on Geotechnical Investigation for Phase 2 Sioux Falls Flood Protection Project, August 2001, prepared by Golder Assoc., Littleton, Colorado.
 4. Geophysical surveying performed by Microphysica Corporation (MPC) of Ames, Iowa, in January and February of 2001. Reference Final Report on Geotechnical Investigation for Phase 2 Sioux Falls Flood Protection Project, August 2001, prepared by Golder Assoc., Littleton, Colorado.
 5. Reference sheets G100 - G122 for soil boring logs. These sheets are not included in this package, but are available for review upon request.

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LONG. 96.7686

SITE #2
LAT. 43.5184
LONG. 96.7690

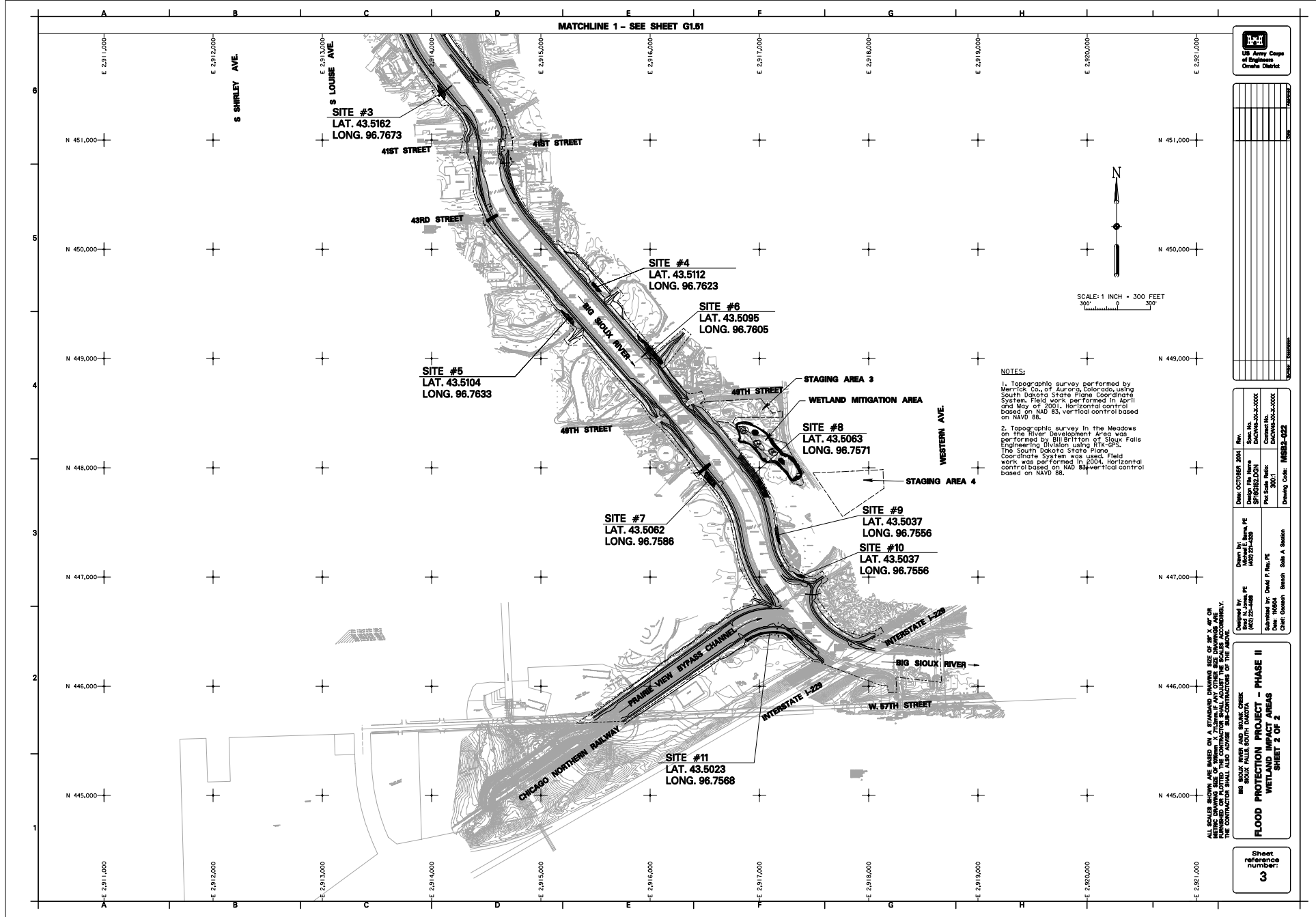
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IF THE DRAWING IS REDUCED OR ENLARGED, THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY.
THE CONTRACTOR SHALL ALSO ADJUST THE SCALES ACCORDING TO THE ABOVE.

US Army Corps of Engineers
Omaha District

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Scale: 1" = 3000'	Scale: 1" = 3000'	Scale: 1" = 3000'	Scale: 1" = 3000'
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FLOOD PROTECTION PROJECT - PHASE II
WETLAND IMPACT AREAS
SHEET 1 OF 2

Sheet reference number:
2



NOTES:

1. Topographic survey performed by Merrille Co. of Aurora, Colorado, using South Dakota State Plane Coordinate System. Field work performed in April and May of 2001. Horizontal control based on NAD 83, vertical control based on NAVD 88.

2. Topographic survey in the Meadows on the River Development Area was performed by Bill Britton of Sioux Falls Engineering Division using RTK-GPS. The South Dakota State Plane Coordinate System was used. Field work was performed in 2004. Horizontal control based on NAD 83, vertical control based on NAVD 88.

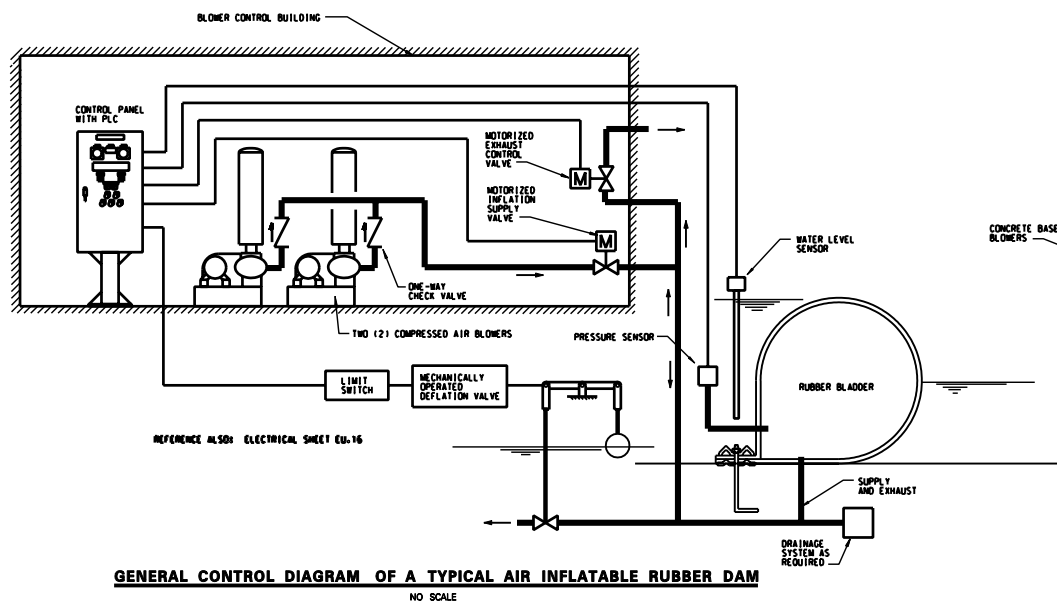
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FLOOD PROTECTION PROJECT - PHASE II
WETLAND IMPACT AREAS
SHEET 2 OF 2

Sheet
reference
number
3

Drawn By:	Michael E. Jones, PE	Check By:	David P. Ray, PE
Design File Name:	440121-028	Project No.:	DAWNE-004-0000
Scale:	AS SHOWN	Contract No.:	DAWNE-004-0000
File Scale Ratio:	1:1	Drawn Code:	MSB23-002

US Army Corps
of Engineers
Omaha District



REFERENCE SHEETS:

ELECTRICAL SITE PLAN	SHEET EU.16
GRADING SITE PLAN	SHEET G3.14

NOTES:

1. ALL ITEMS AND WORK ON THIS SHEET ARE TO BE DESIGNED, DELIVERED AND INSTALLED BY CONTRACTOR UNDER THIS CONTRACT.

ALL SCALES SHOWN ARE BASED ON A STANDARD DRAWING SIZE OF 28" X 40" OR METRIC DRAWING SIZE OF 1016mm X 711.2mm. IF ANY OTHER SIZE DRAWINGS ARE FURNISHED OR PLOTTED THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY. THE CONTRACTOR SHALL ALSO ADVISE SUB-CONTRACTORS OF THE ABOVE.

**BIG SIOUX RIVER AND SKUNK CREEK
SIOUX FALLS, SOUTH DAKOTA**

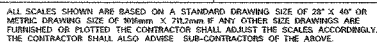
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Date: OCTOBER 2004	Rev.
Design File Name SF16M703.DGN	Spec. No. DACH45-X-X-3000
Plot Scale Ratio:	Contract No. DACH45-X-X-3000

Designed by: _____ Drawn by: _____
K.E.M. K.E.M.

Submitted by: MICHAEL T. SMITH P.E.
Date: _____

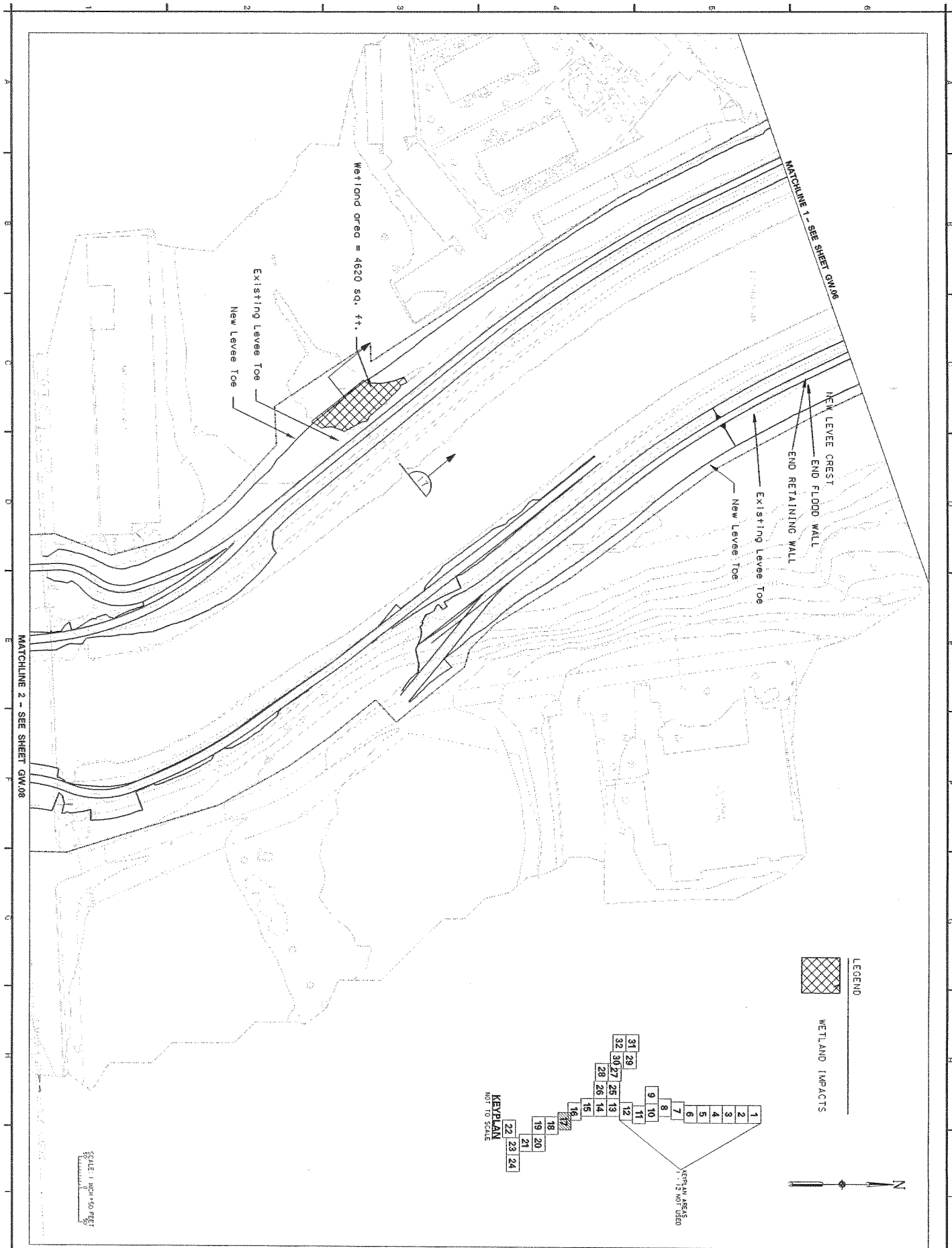


Designed by: BNJ (402) 221-4466	Drawn by: MEB (402) 221-4329
Submitted by:	
Date:	
Chief: Soils A Section	

Date: OCTOBER 2004	Rev.
Design File Name SF16GW16 DGN	Spec. No. DACW45-XX-X-XXXX
Plot Scale Ratio: 50:1	Contract No. DACW45-XX-X-XXXX
Revision Code: MSB2-022	



US Army Corps
of Engineers



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Sheet
Reference
AREAT7

BIG SIOUX RIVER AND SIOUX CREEK
SIOUX FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 17 OF 28

Designed by:
RNL
(402) 224-4888

Drawn by:
MEB
(402) 224-4329

Submittal by:
Date:
Chief: Scott A. Secura

Date: OCTOBER 2004

Design File Name:
SF16GW17.DGN

Plot Scale Ratio:
50:1

Drawing Code: MSB2-022

Rev.	Spec. No.	Contract No.
1	DAOWS-00-K-0000	DAOWS-00-K-0000





WETLAND IMPACTS



Designed by:
BNU
(402) 221-4488

Submitted by:
Date:
Chief: Scott A.

Drawn by:
MEB
(402) 221-4329

Date: OCTOBER 200
Design File Name SF16GW18.DGN
Plot Scale Ratio: 50:1
Drawing Code: MS

Rev.
Spec. No. DACW45-XX-X-XXXX
Contract No. DACW45-XX-X-XXXX

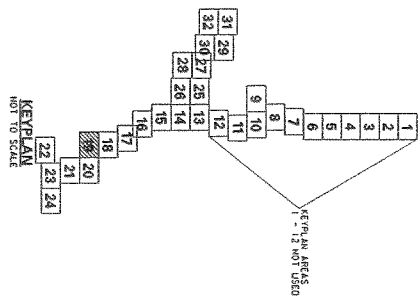
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FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 18 OF 28

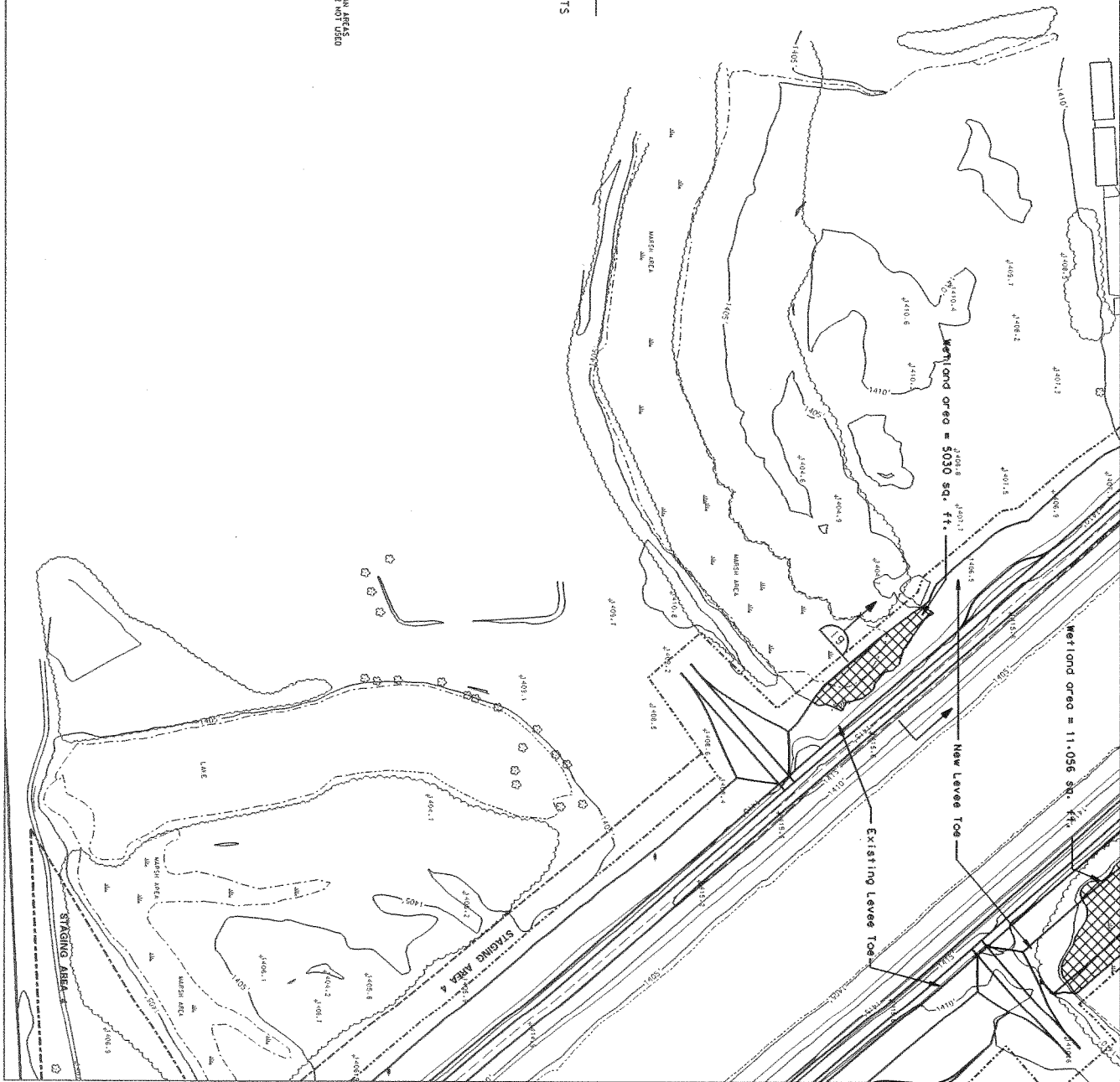
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reference
number:
AREA18

US Army Corps
of Engineers
Omaha District

SCALE: 1"=50' FEET
1"=50'



LEGEND
WETLAND IMPACTS



MATCHLINE 1 - SEE SHEET GW.08

MATCHLINE 2 - SEE SHEET GW.10

ALL SCALES SHOWN ARE BASED ON A STANDARD DRAWING SIZE OF 28" X 40" OR METRIC DRAWING SIZE OF 300mm X 712mm. IF ANY OTHER SIZE DRAWINGS ARE FURNISHED OR PLOTTED THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY. THE CONTRACTOR SHALL ALSO ADVISE SUB-CONTRACTORS OF THE ABOVE.

Sheet
Number
AREA19

RIO SIOUX RIVER AND SIOUX CREEK
SIOUX FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 19 OF 28

Designed by:
BRI
(605) 221-4488
Submitted by:
Date:
Checked, Scale A Section

Drawn by:
BRI
(605) 221-4320

Date: OCTOBER 2004
Design File Name:
SPRINGSIDE.DGN
Plot Scale, Ratio:
50:1
Drawing Code: **MSB2-022**

Rev:
Spec. No.
CADDWMS-XX-X-XXXX
Contract No.
CADDWMS-XX-X-XXXX

Project
Title
Scale
Date
Author
Checked
Drawn
Plotted
Reviewed
Approved

WETLAND IMPACTS

KEY PLAN
NOT TO SCALE

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KEY PLAN AREA
1" = 12' NOT ASSR

Date: OCTOBER 2004	Rev.
Design File Name SF18GW20.DGN	Spec. No. DACN45-XX-X-XXXX
Plot Scale Ratio: 50:1	Contract No. DACN45-XX-X-XXXX
Drawing Code: MSB2-022	

Sheet
reference
number:
AREA20

BIG SIOUX RIVER AND SKUNK CREEK
SIOUX FALLS, SOUTH DAKOTA

FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 20 OF 28

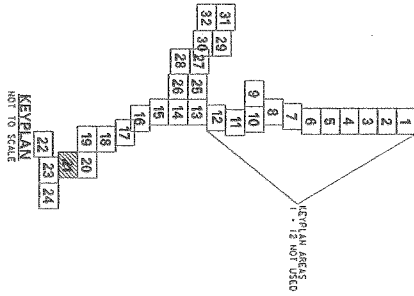


US Army Corps
of Engineers
Omaha District

SCALE: 1 INCH = 50 FEET
50'
0' 50'



WETLAND IMPACTS



WETLAND AREAS
1 - 32 NOT TO SCALE

MATCHLINE 1 - SEE SHEET GW/10

MATCHLINE 2 - SEE SHEET GW/12



ALL SCALES SHOWN ARE BASED ON A STANDARD DRAWING SIZE OF 28" X 40" OR
METRIC DRAWING SIZE OF 300mm X 750mm IF ANY OTHER SIZE DRAWINGS ARE
FURNISHED OR PLOTTED THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY.
THE CONTRACTOR SHALL ALSO ADVISE SUB-CONTRACTORS OF THE ABOVE.

BIG SIOUX RIVER AND SNAKE CREEK
SIOUX FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 21 OF 28

Designed by:
RUE
1807/221-4468
Submittal by:
GSE
Chief: Sub A Section

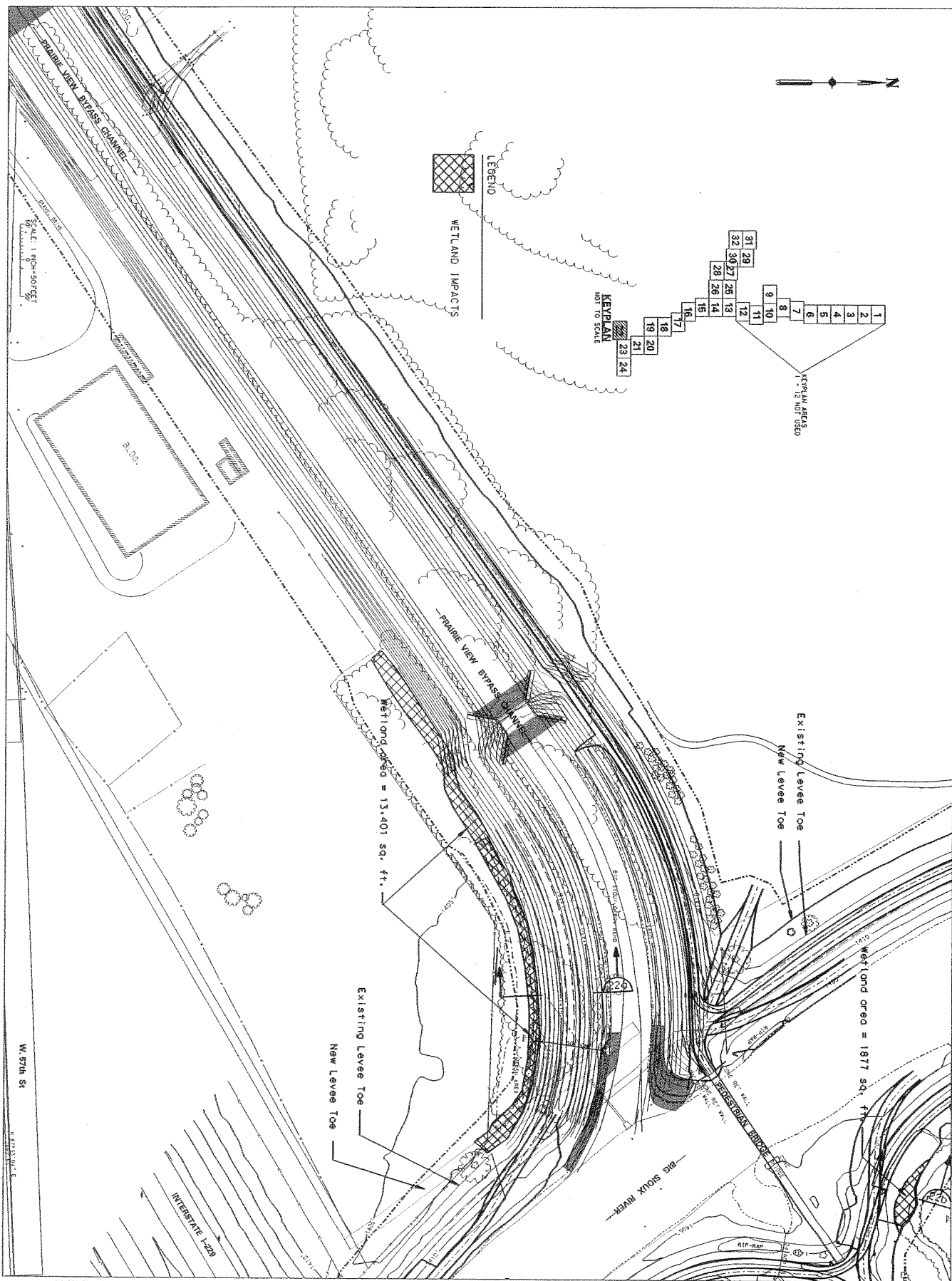
Drawn by:
RUE
1807/221-4329

Date: OCTOBER 2004
Design File Name
SFHGW21.DGN
Plot Scale: Ratio:
50:1
Drawing Code: MSB2-022

Rev:
Spec No:
D02046-00-X-0000
Contract No:
D02046-00-02-0000

Sheet
Numbered
AREA21





MATCHLINE 2 - SEE SHEET GW/11

ALL SCALES SHOWN ARE BASED ON A STANDARD DRAWING SIZE OF 24" X 36" OR METRIC DRAWING SIZE OF 914mm X 712mm. IF ANY OTHER SIZE DRAWINGS ARE FURNISHED OR PLOTTED THE CONTRACTOR SHALL ADJUST THE SCALES ACCORDINGLY. THE CONTRACTOR SHALL ALSO ADVISE SUB-CONTRACTORS OF THE ABOVE.

Sheet:
FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 22

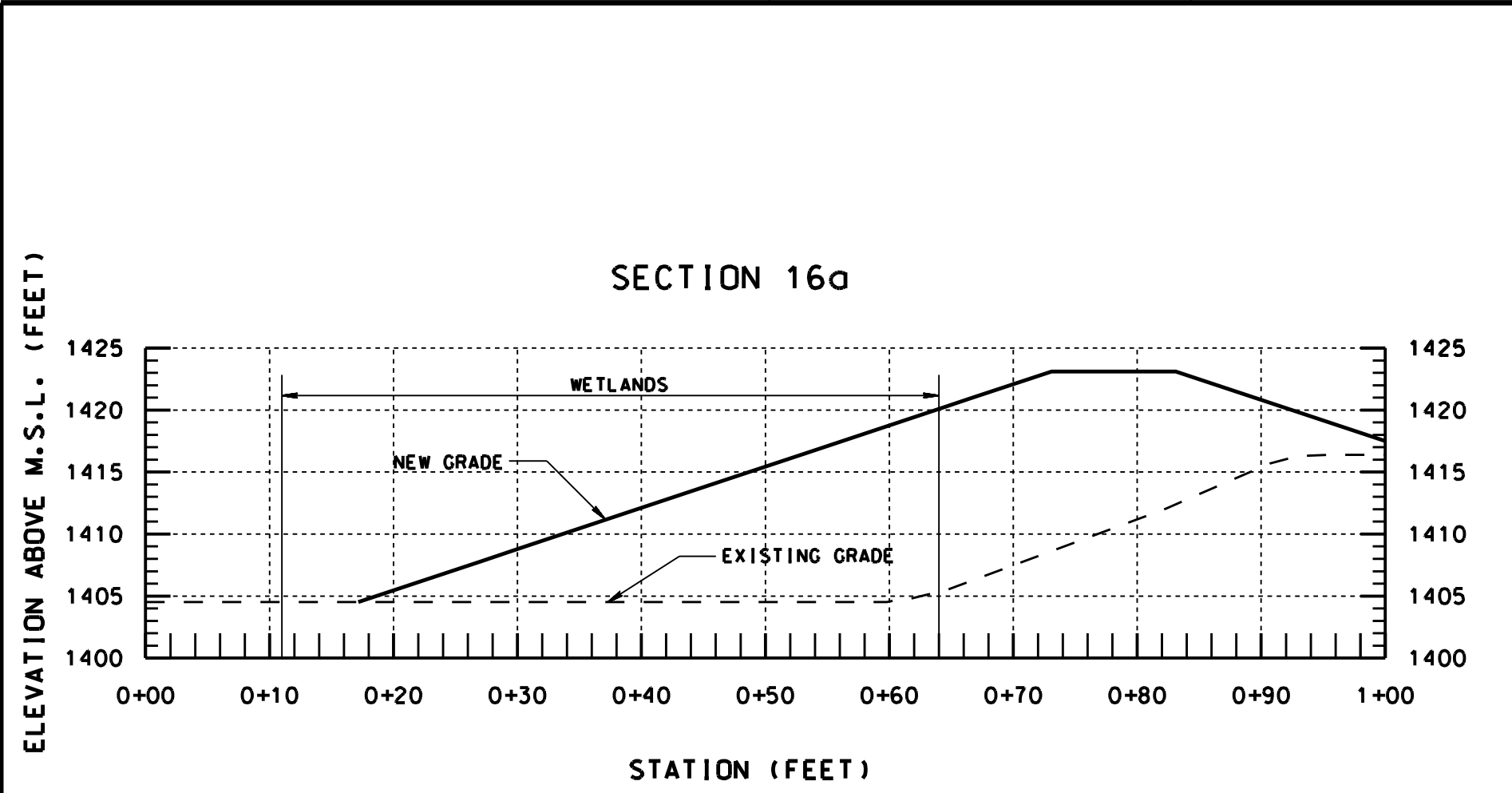
DIG SIOUX RIVER AND SHUNK CREEK
SIOUX FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT - PHASE II
WETLANDS IMPACT AREAS
AREA 22 OF 28

Designed by:
BRI
(402) 221-4488
Submitted by:
Date:
Chief: Sols A Section

Drawn by:
MSB
(402) 221-4329
Design File Name:
SFIRGW22.DGN
Plot Scale Ratio:
50:1
Drawing Code: MSB2-022

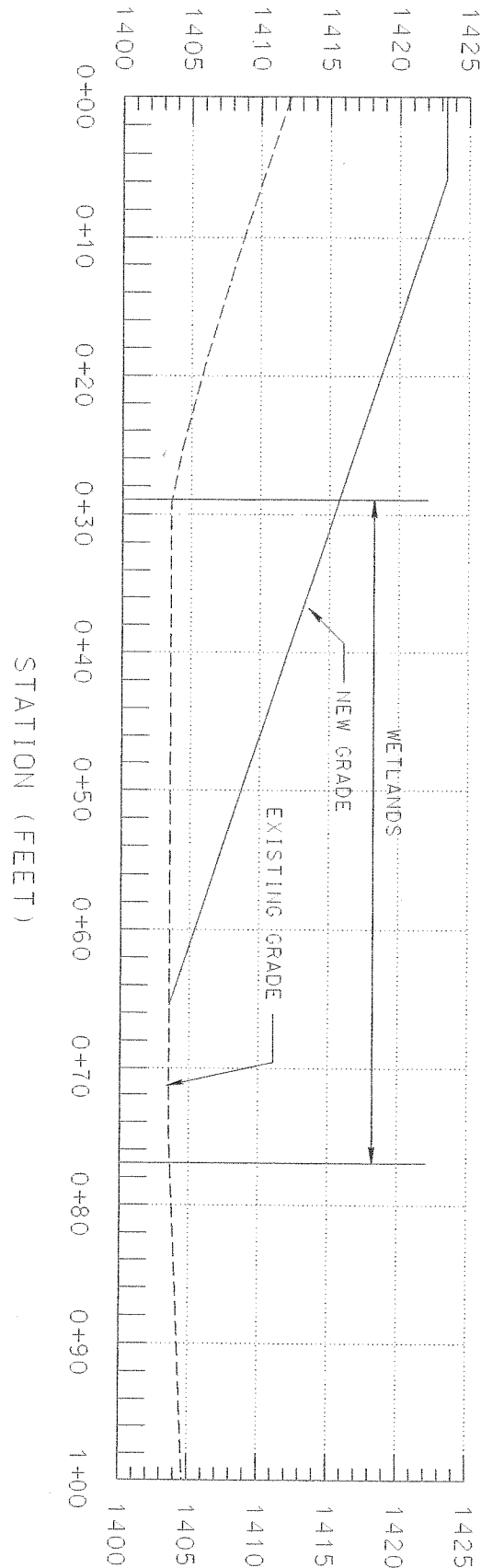
Draw: OCTOBER 2004	Rev:
Spec. No.	ENCLOSURE-00-0-0000
Contract No.	DAWMS-00-0-0000
Drawn by:	
Checked by:	
Approved by:	





Computer File: SELECTED		Spec. No. DACC	Submitted by: Chief	Designed by: X	Checked by: X
Date: X		Contract No. DACC	Section X	Reviewed by: X	Drawn by: X
Sheet No. AREA16a		SIOUX FALLS SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PAHSE 2 WETLANDS IMPACT AREAS SHEET 1 OF 7			

ELEVATION ABOVE M.S.L. (FEET)



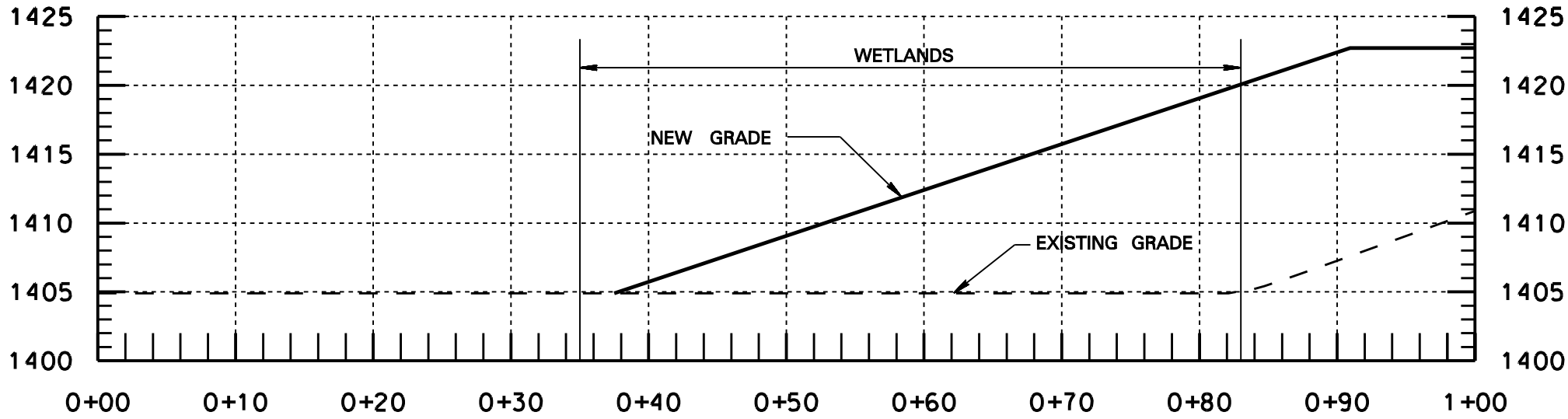
SECTION 16b

AREA16b	Computer File:	Spec. No.	U.S. ARMY ENGINEER DISTRICT		Submitted by:		Designed by:	Checked by:
	SECTION.DGN	DACX	CORPS OF ENGINEERS		Chief X Section		X	X
	Date:	Contract No.	OMAHA, NEBRASKA				Reviewed by:	Drawn by:
	X	DACX					X	X
Drawing Code:		X X						



SIoux FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT
BIG SIOUX RIVER AT SIOUX FALLS-PAHSE 2
 WETLANDS IMPACT AREAS, SHEET 1 OF 7

ELEVATION ABOVE M.S.L. (FEET)

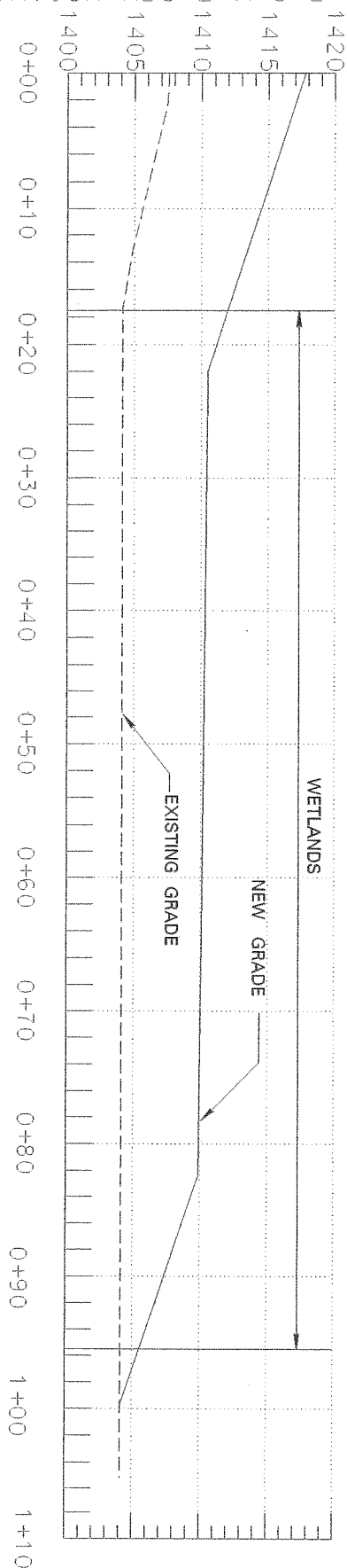


SECTION 17

Computer File: SECTION 17	Spec. No. DACC	Contract No. DACC	Date: X	Drawing Code: X	Sheet No. AREA17	U S ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA	SIOUX FALLS, SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PAHSE 2 WETLANDS IMPACT AREAS, SHEET 2 OF 7	Submitted by: Chief	Designed by: X	Reviewed by: X	Checked by: X

ELEVATION ABOVE M.S.L. (FEET)

STATION (FEET)

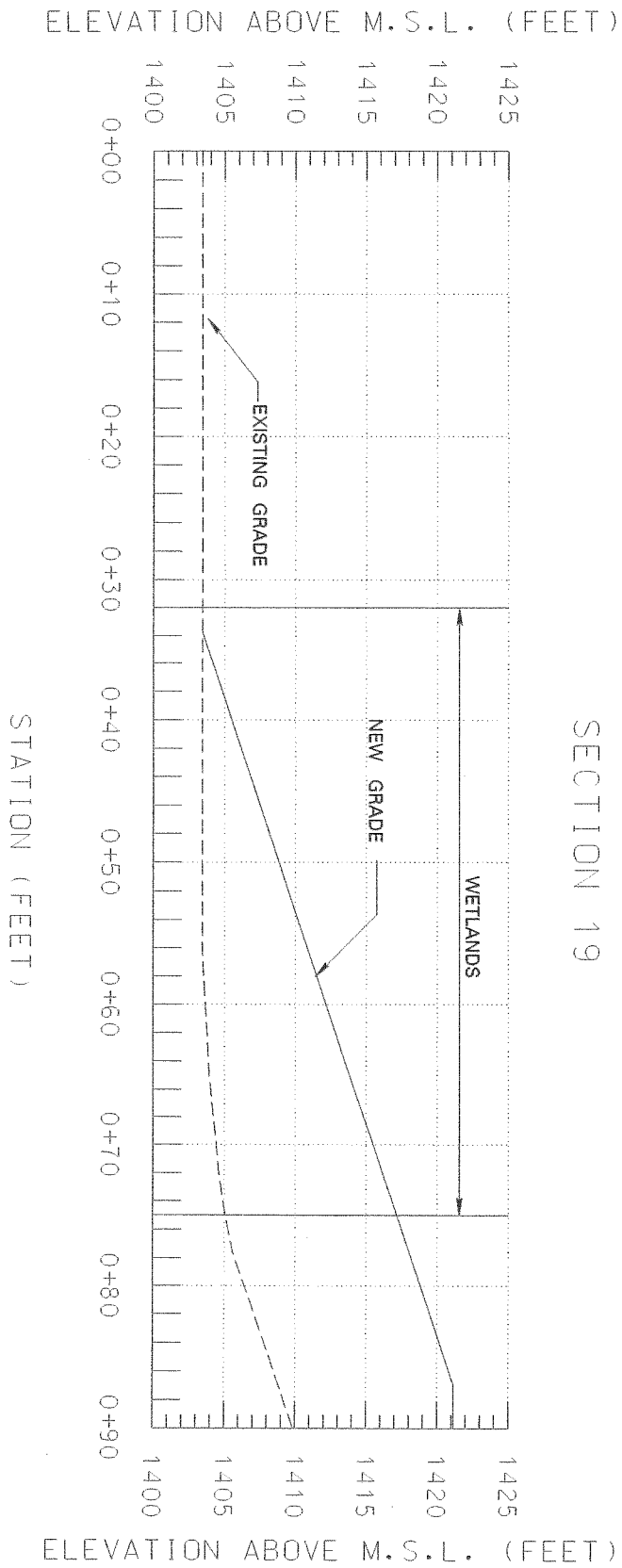


SECTION 18

SHEET NO. AREA 18	Computer File:	Spec. No.	Submitted by:		Designed by:	Checked by:
	SECTION 18	DACX			X	X
	Date:	Contract No.			Reviewed by:	Drawn by:
	X	DACX			X	X
Drawing Code:		X	X	Chief	X	Section

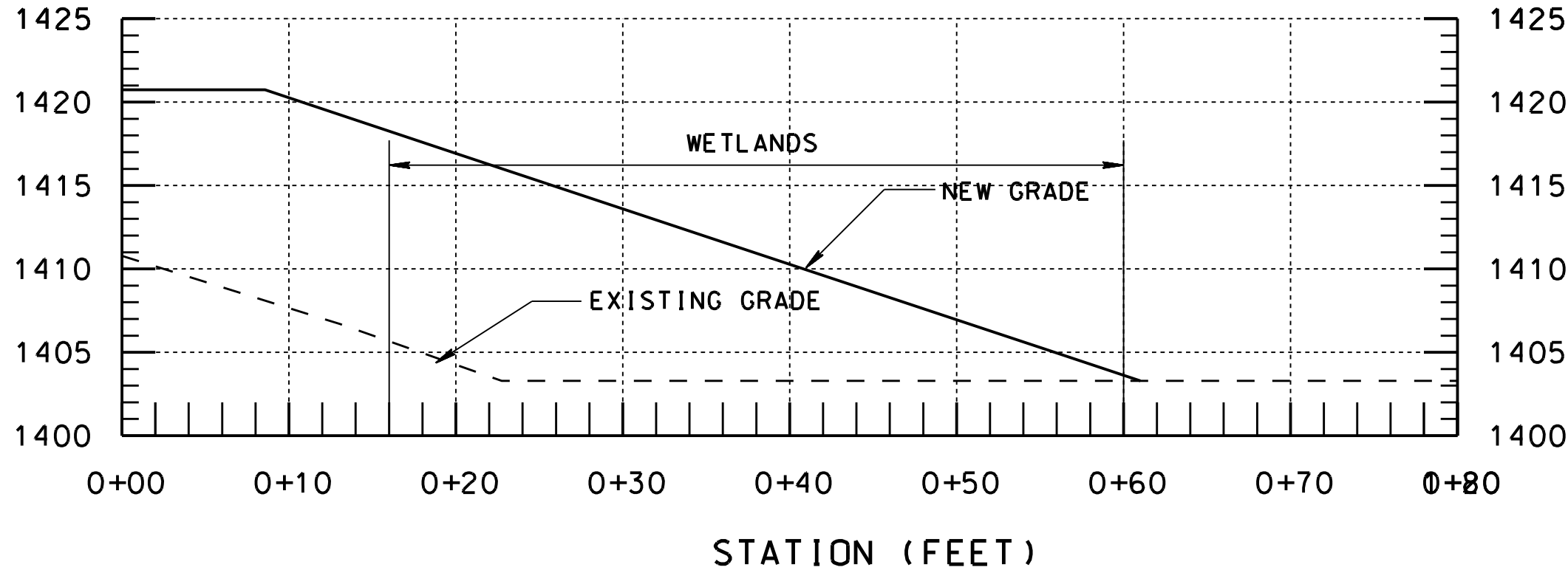
U S ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

SIoux FALLS, SOUTH DAKOTA
FLOOD PROTECTION PROJECT
BIG SIOUX RIVER AT SIOUX FALLS-PAHSE 2
WETLANDS IMPACT AREAS, SHEET 3 OF 7



AREA19	Computer File: SECT19A.DGN	Spec. No. DACX		U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA	SIOUX FALLS, SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PAHSE 2 WETLANDS IMPACT AREAS, SHEET 4 OF 7	Submitted by: Chief X Section	Designed by: X	Checked by: X
	Date: X	Contract No. DACX		Reviewed by: X	Drawn by: X			
	Drawing Code: X X							

ELEVATION ABOVE M.S.L. (FEET)

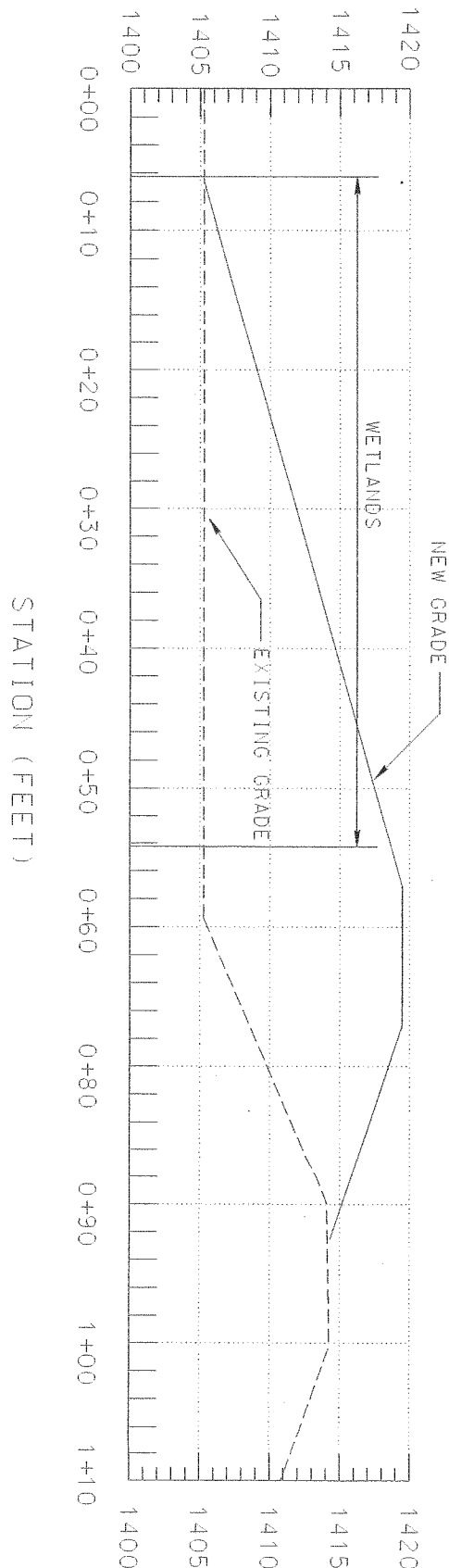


SECTION 20

ELEVATION ABOVE M.S.L. (FEET)

Computer File: SECT20.DGN		Spec. No. DACX	Submitted by: Chief		SIOUX FALLS, SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2 WETLANDS IMPACT AREAS, SHEET 6 OF 7		Designed by: X		Checked by: X		
Date: X	Contract No. DACX		X		Section		Reviewed by: X		Drawn by: X		
Drawing Code:		X		X		X		X		X	
Sheet No. AREA20											

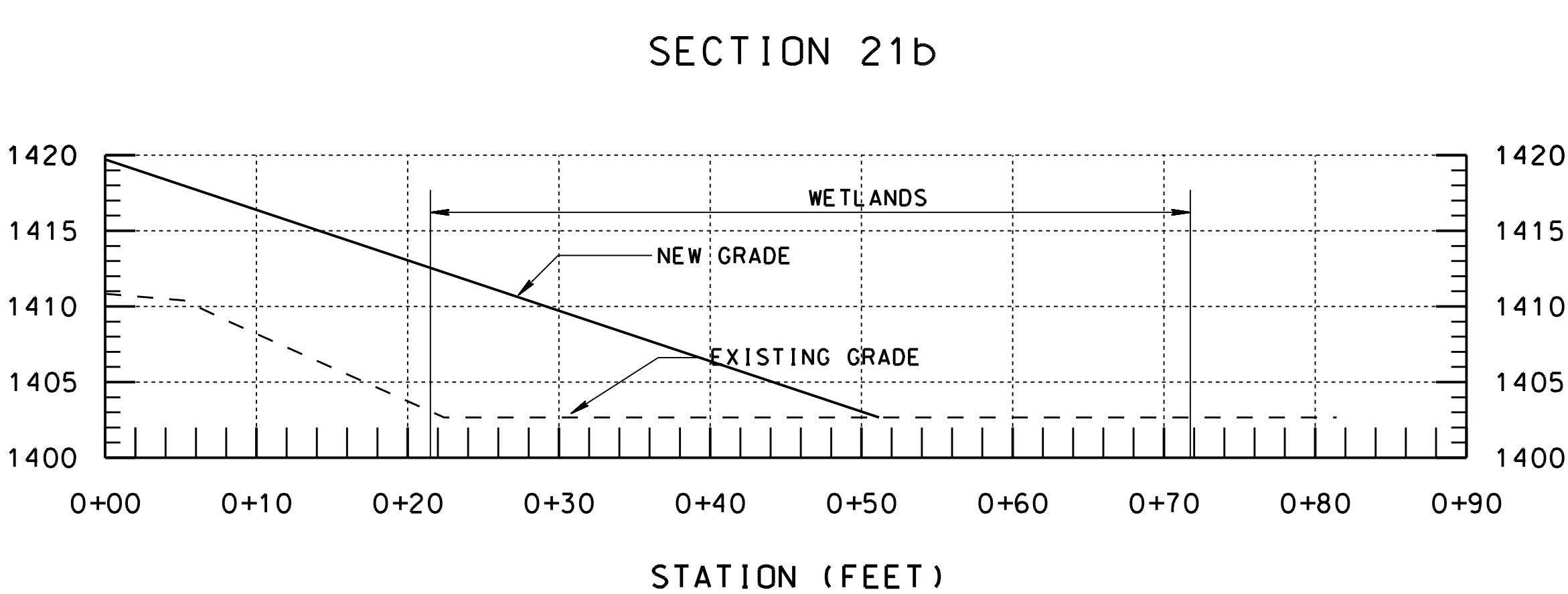
ELEVATION ABOVE M.S.L. (FEET)



SECTION 21G

AREA 1A	Computer File:	Spec. No.	U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA	SIOUX FALLS, SOUTH DAKOTA		Submitted by:	Designed by:	Checked by:
	SECTION:	DACX		FLOOD PROTECTION PROJECT			X	X
	Date:	DACX		BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2			X	X
	Drawing Code:	X X		WETLANDS IMPACT AREAS, SHEET 6 OF 7		Chief	X	Section

ELEVATION ABOVE M.S.L. (FEET)

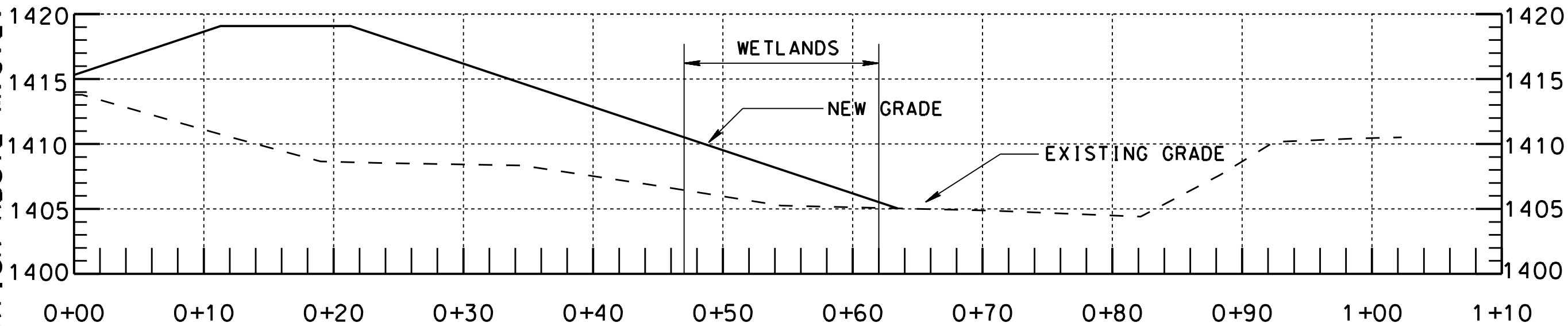


STATION (FEET)

ELEVATION ABOVE M.S.L. (FEET)

Computer File: SECT21A.DGN		Spec. No. DACX	Submitted by: Chief X		Designed by: X		Checked by: X
Date: X	Contract No. DACX		Reviewed by: X		Drawn by: X		
Sheet No. AREA21B		SIOUX FALLS, SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2 WETLANDS IMPACT AREAS, SHEET 6 OF 7					

ELEVATION ABOVE M.S.L. (FEET)

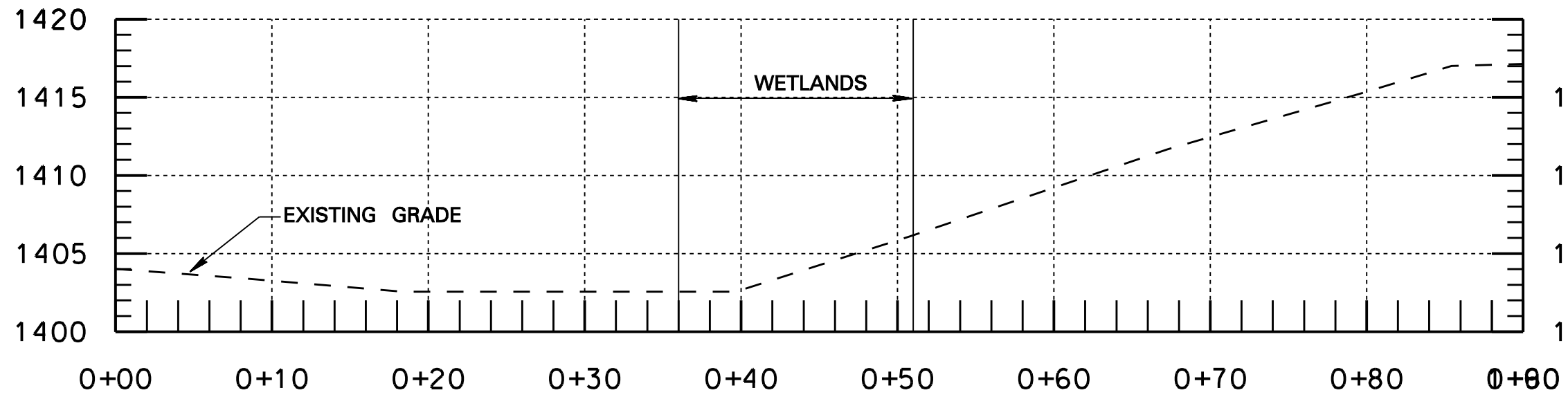


SECTION 21C

STATION (FEET)

Computer File: SECTION 21C.DGN		Spec. No. DACX	Submitted by: Chief		Designed by: X		Checked by: X	
Date: X	Contract No. DACX		X		Reviewed by: X		Drawn by: X	
Sheet No. AREA21C			FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2 WETLANDS IMPACT AREAS, SHEET 6 OF 7					
CORPS OF ENGINEERS OMAHA, NEBRASKA			SIOUX FALLS, SOUTH DAKOTA					

ELEVATION ABOVE M.S.L. (FEET)



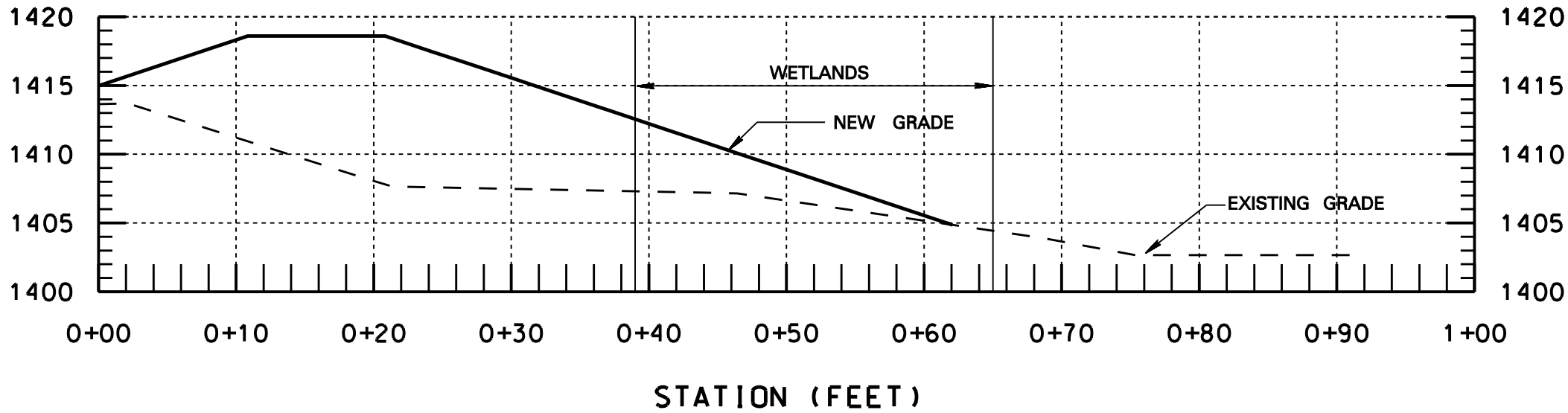
SECTION 22a

STATION (FEET)

ELEVATION ABOVE M.S.L. (FEET)

Computer File: SEC122A.DGN		Spec. No. DACX	Submitted by: Chief		SIOUX FALLS, SOUTH DAKOTA FLOOD PROTECTION PROJECT BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2 WETLANDS IMPACT AREAS, SHEET 6 OF 7		Submitted by: X		Checked by: X		
Date: X	Contract No. DACX		X		X		Reviewed by: X		Drawn by: X		
Drawing Code:		X		X		X		X		X	
Sheet No. AREA22A											

ELEVATION ABOVE M.S.L. (FEET)



ELEVATION ABOVE M.S.L. (FEET)

Computer File: SECT22B.DGN		Spec. No. DACX	Contract No. DACX		Drawing Code: X X X	
Date: X		U S ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA		SIoux FALLS, SOUTH DAKOTA		
Sheet No. AREA22B		BIG SIOUX RIVER AT SIOUX FALLS-PHASE 2 WETLANDS IMPACT AREAS, SHEET 7 OF 7		FLOOD PROTECTION PROJECT		
		Submitted by: Chief X		Designed by: X		
		Reviewed by: X		Checked by: X		
				Drawn by: X		